ABSTRACT OF THE DISCLOSURE

An NMR probe, includes a permanent magnet generating a static magnetic gradient field (B_0); and a pair of RF coils enclosing the permanent magnet for receiving RF current to generate a varying magnetic field (B_1) perpendicular to the static magnetic gradient field (B_0). The pair of RF coils are orthogonally located with respect to each other such that the gradient magnetic field (B_1) is rotatable about the longitudinal axis of the probe according to the current through one RF coil relative to that through the other RF coil. As described, the NMR probe is particularly useful for intra-luminal imaging.